KHARAKER, G.M., inzh.

The fourth all-Union conference on advanced technology, mechanization and automation in the machinery industry. Vest.mashinostr. 45 no.10:79-80 O '65.
(MIRA 18:11)

KHARAMPASH, A.Ia.

Blood preservation and preparation of native plasma at regional and district hospitals. Probl. gemat. i perel. krovi 9 no.8:53-54 Ag '64. (MIRA 18:3)

1. Zaveduyushchiy otdeleniyem perelivaniya krovi Tatarskogo kraya.

SUPRUNOV, A., inzh.; SMORODINSKIY, A., inzh.; KHARAKHASH, V., inzh.

Installation of pneumatic transportation in the grain cleaning section of the Kharkov Flour Mill No.3. Muk.-elev. prom. 23 no.10: 16-19 O '57. (MIRA 11:1)

1. Khar'kovskoye oblastnoye upravleniye khleboproduktov.
(Kharkov--Flour mills) (Pneumatic-tube transportation)

SUPRUNOV, A., inzh.; KHARAKHASH, V., inzh.; MALYY, N., inzh.

Over-all mechanization in the packing department of the Flour Mill No.8 in Volchansk. A.Suprunov, V.Kharakhash, N.Malyi. Muk.-elev.prom. 24 no.3:18-19 Mr '58. (MIRA 12:9)

1. Khar'kovskoye oblastnoye upravleniye khleboproduktov (for Suprunov, Khardkhash). 2. Volchanskaya mel'nitsa No.8 (for Malyy).
(Volchansk--Flour mills--Equipment and supplies)

SUPRUNOV, A., inzh.; KHARAKHASH, V.

Mechanization of standard granaries located away from railroads.
Muk.-elev.prom. 25 no.12:18-19 D '59. (MIRA 13:4)

1. Khar'kovskoye upravleniye khleboproduktov.
(Grain-handling machinery)

SUPRUNOV,, inzh.; KHARAKHASH, V., inzh.

Plans for feedmilling sections of corn-processing plants. Muk.-elev. prom. 26 no.9:19-20 S '60. (MIRA 13:9)

1. Otdel mukomol'no-krypyanykh predpriatiy Khar'kovskogo upravleniya khleboproductov.

(Feed mills)

KHARAKHASH, Viktor Andreyevich; SOKOLOVSKIY, M.V., inzh., red.; RIKBERG, D.B., red.; GOLOSTAYPOL'SKAYA, M.S., tekhn. red.

[Cylindrical reducing gears; reference manual] Reduktory tsilindricheskie; spravochnoe rukovodstvo. Moskva, Mashgiz, 1961. 146 p. (MIRA 15:2)
(Gearing, Spur)

L 60043-65 EWT(m)/EPF(c)/EWP(v)/EWP(j)/T Pc-4/Pr-4/Ps-4 WW/JAJ/RM

ACCESSION NR: AP5018043 UR/0191/65/000/007/0064/0064
678-416.017

32
B

AUTHOR: Zybin, Yu. A.; Samsonov, V. G.; Kharakhash, V. G.; Dorfman, E. M.

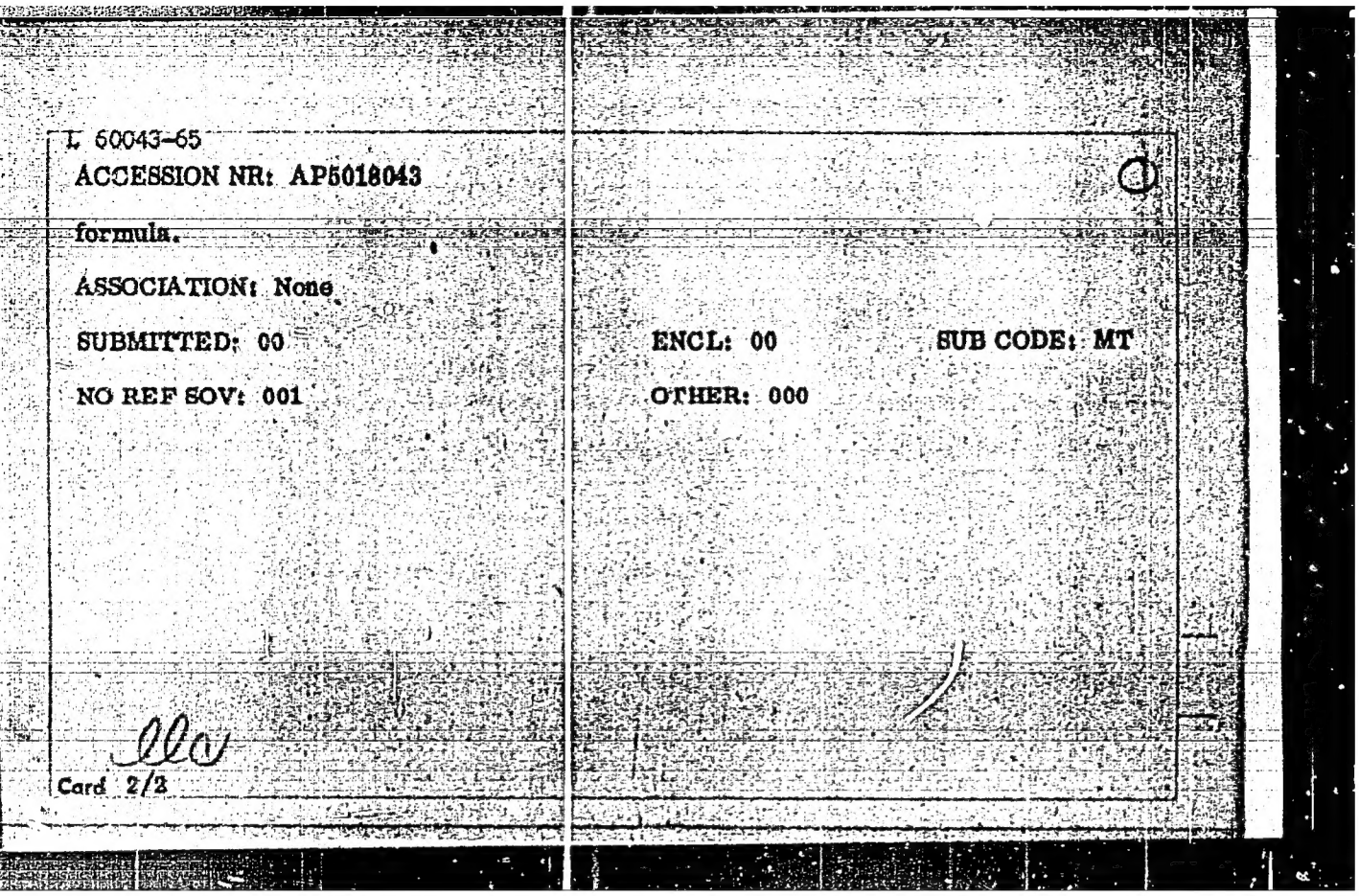
TITLE: Lined plastics and their testing

SOURCE: Plasticheskiye massy, no. 7, 1965, 64

TOPIC TAGS: plastic material, polyfluoroethylene resin, polyethylene, adhesive bonding, plastic mechanical property, shear strength, cleavage strength, lined plastic

ABSTRACT: Stable plastics such as polyfluoroethylene resins and polyethylene cannot be deposited on metal surfaces because they do not adhere without special pretreatment of these surfaces. To eliminate this disadvantage, such plastics are joined to other materials, forming lined plastics which combine the high chemical stability of polyfluoroethylene resins and polyethylene with the adhesive properties of other materials. The adhesion bonds are subjected to shearing and cleavage tests. In many cases, it is important to know the behavior of the adhesion bonds under dynamic loads and impact loads. A method for carrying out the above tests is described. It is recommended as the basis for standardized testing of lined plastics bonded to metals. Orig. art. has: 1

Card 1/2



L 60043-65
ACCESSION NR: AP5018043

formula.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

NO REF SOV: 001 OTHER: 000

Card 2/2

L 27221-66 EWP(j)/EWT(m)/T/EWP(t) IJP(c) RM/JD/HW/WB

ACC NR: AM6002129 Monograph UR/

40
B+1

Samsonov, Vladimir Georgiyevich; Kharakhash, Viktor Georgiyevich; Mironenko, Nikolay Ivanovich; Safonov, Aleksandr Ivanovich; Pesikov, Ruvim Semenovich; Alekseyev, Nikolay Nikolayevich

Anticorrosion plastic coatings (Protivokorrozionnyye plastmassovyye pokrytiya) Kiev, Izd-vo "Tekhnika," 1965. 89 p. illus., biblio. 5000 copies printed.

TOPIC TAGS: material control, plastic coating, corrosion inhibition

PURPOSE AND COVERAGE: The booklet deals with the problems of using polymeric materials for anticorrosion protection of the inner surfaces of tubes, pipelines, and valves. The use of these materials makes it possible to economize on nonferrous metals and stainless steel, as well as to increase the useful life of ferrous metals. Technological methods are described, and economic data on the protection of equipment with polymeric materials are presented. The booklet is intended for specialists in the chemical and food industries who deal with the problems of anticorrosion protection of plant apparatus. There are 47 references, of which 43 are Soviet.

TABLE OF CONTENTS:

Card 1/2 UDC: 678.026

L 27221-66
ACC NR: AM6002129

SUB CODE: 11/ SUBM DATE: 23Sep65/ ORIG REF: 038/ OTH REF: 009

Card 2/2

KHARAKHASH, V.G., inzh.; YAROZHEVSKIY, S.A., inzh.; ALEKSEYEV, N.N., inzh.; KOLESNIK, N.I., inzh.; FRIDMAN, O.A., inzh.; GRUBA, A.I., inzh.; GRIN', L.V.; PETRAKOV, V.I.

Electric insulation coatings on the inside surface of battery boxes of electric mine locomotives. Ugol' Ukr. 10 no. 1: 31-33 Ja '66. (MIRA 18:12)

1. Ukrainskiy nauchno-issledovatel'skiy institut plasticheskikh mass.

ACC NR: AP7003537 SOURCE CODE: UR/0386/67/005/001/0024/0025

AUTHOR: Garif'yanov, N. S.; Khabibullin, B. M.; Kharakhash'yan, E. G.; Bezzubov, A.L.

ORG: Kazan' Physicotechnical Institute, Academy of Sciences SSSR (Kazanskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR)

TITLE: Electron paramagnetic resonance in lithium containing impurities of group IIB metals

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 5, no. 1, 1967, 24-25

TOPIC TAGS: lithium, electron paramagnetic resonance, spin orbit relaxation, spin orbit interaction, conduction electron, epr spectrum, line width

ABSTRACT: To check whether the main mechanism of spin relaxation is spin-orbit interaction of the conduction electrons with the impurity atoms, the authors investigated the effect of small admixtures of Zn, Cd, and Hg on the EPR line width of Li. The initial material was ~99% pure LE-1 lithium (measured relaxation time $T_1 = 9.4 \times 10^{-9}$ sec). The alloy was prepared in an atmosphere of pure helium and dispersed by ultrasound in dehydrated paraffin to an average particle size $\lesssim 8\ \mu$. The measurements were made at 9320 MHz and room temperature. It follows from the experimental data that the peak line width δH increases linearly with increasing c in the investigated concentration interval. An estimate shows that the spin-orbit interaction of electrons with the impurity atoms in the metal does not differ in order of magnitude from its value

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ACC NR: AP7003537

for the free atom. Consequently, the expected effect of screening the spin-orbit interaction by conduction electrons is nonexistent. The contrary is more likely, that if the presented estimates are correct the redistribution of the electron density near the impurity atom leads to an antiscreening effect which apparently has a tendency to grow with increasing Z. The authors thank Professor B. M. Kozyrev for continuous interest in the work and valuable advice. Orig. art. has: 1 figure, 1 formula, and 1 table.

SUB CODE: 20/ SUBM DATE: 20Oct66/ OTH REF: 004

Card 2/2

S/120/60/000/005/041/051
E032/E314

AUTHORS: Sevast'yanov, B.K. and Kharakhash'yan, E.G.

TITLE: Torsional Magnetic Balance with DC Compensation of the Displacement of the Specimen

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No. 5, pp. 135 - 137

TEXT: A description is given of a torsional balance for the range $1 \cdot 10^{-4}$ - 10 dyne cm. The balance can be used to determine the magnetic moments in a wide temperature range, right down to helium temperatures. The balance is shown schematically in Fig. 1. The aluminium frame 8 is suspended on a thin phosphor bronze wire having an elastic constant of 3×10^{-2} dyne.cm/rad. The aluminium frame carries two coils, namely, a compensation and a calibration coil. These coils consist of 50 turns of 0.1 dia. wire of type ПЭ (PE). It also carries a plane mirror 6 and a glass rod, to which the specimen 12 is attached. At the lower end, the glass rod is kept in position by the quartz filament 18 (10 μ in diameter). The latter filament is kept taut by the phosphor

Card 1/3

Torsional Magnetic Balance with DC Compensation of the Displacement of the Specimen

bronze spring 13 . The compensating and calibrating currents are supplied to the coils by special leads in the form of silver foils (25 x 0.5 mm^2). The phosphor bronze filament serves as a common current lead for the two coils. The suspended system can be assembled and adjusted outside the glass container tube 4 . The plane mirror carried by the aluminium frame is illuminated through a rectangular slit so that, in the absence of a couple acting on the specimen, one-half of the reflected image falls on one cell and the other on another cell, the two cells being connected to a DC amplifier, as shown in Fig. 2. The magnetic field applied to the specimen 12 is produced by the external electro-magnet 15 , while the calibrating and compensating coils are in the field of the permanent magnet 10 .

Card 2/3

L 46325-65 EWT(1) IJP(c)

ACCESSION NR: AP5011884 UR/0120/65/000/002/0126/0130

AUTHOR: Golenishchev-Kutuzov, V. A.; Kharakhash'yan, E. G. 23 22 B

TITLE: Acoustic paramagnetic spectrometer 21

SOURCE: Pribory i tekhnika eksperimenta, no. 2, 1965, 126-130

TOPIC TAGS: spectrometer, paramagnetic spectrometer, acoustic spectrometer, sound absorption, acoustic resonator

ABSTRACT: A device for measuring sound absorption by paramagnetics is described; continuous generation at 10—70 Mc within a temperature range of from liquid-hydrogen to room temperature is used. The effect of the acoustical resistance of a specimen placed in a static magnetic field upon the reaction of the r-f oscillator is measured. The nonresonance sound absorption in potassium chrome alum and in copper sulfate for various magnetic-field intensities was measured. The acoustic spectrometer makes it possible to measure variations of the absorption factor from 10^{-3} to 10^{-6} per cm with the damping factor α_0 approximately 10^{-2} per cm. The maximum measurable absorption in the magnetic field $\alpha_m = 10^{-2}$ to 10^{-3} per cm. A block diagram of the outfit and a sketch of the acoustic resonator are supplied. Orig. art. has: 4 figures and 7 formulas. [03]

Card 1/2

L 46325-65

ACCESSION NR: AP5011884

ASSOCIATION: Kazanskiy fiziko-tekhnicheskiy institut AN SSSR (Kazan' Physico-technical Institute, AN SSSR)

SUBMITTED: 03Feb64	ENCL: 00	SUB CODE: GP, EC
NO REF SOV: 005	OTHER: 005	ATD PRESS: 4002

Card 2/2

L 51552-65 EWT(l)/EWT(m)/EPF(c)/EWP(j)/EEC(t)/T Pc-4/Pi-4 IJP(c)
WW/GG/RM

ACCESSION NR: AP5010762 UR/0181/65/007/004/1274/1275

AUTHOR: Garif'yanov, N. S.; Kharakhash'yan, E. G. 34 35 B

TITLE: Electron paramagnetic resonance in supercooled solutions of Fe(III), Ru(III), and Os(III)

SOURCE: Fizika tverdogo tela, v. 7, no. 4, 1965, 1274-1275

TOPIC TAGS: supercooled solution, low temperature glass, electron paramagnetic resonance, g factor, spin Hamiltonian, spin lattice relaxation

ABSTRACT: The electron paramagnetic resonance method was used to investigate low-temperature glasses containing octahedral complexes with strong covalent bonds: $K_3Fe(CN)_6$--$3d^5$, Na_3RuCl_6--$4d^5$, and Na_3OsCl_6--$5d^3$. The measurements were made at frequencies 200 and 9320 Mcs at 4.2°K. The solvents were glycerine for the ferricyanide and weak hydrochloric acid for the ruthenium and osmium double chlorides. At 300 Mcs, narrow asymmetric EPR lines were observed, with a spectroscopic splitting factor close to 2. The g-factor values were 2.3 ± 0.1, 2.0 ± 0.1, and 1.8 ± ± 0.1 for Fe(III), Ru(III), and Os(III), respectively. At 9320 Mcs, no EPR lines could be observed in the investigated glasses. It is deduced from the measurements

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L 51552-65
ACCESSION NR: AP5010762

that the investigated substances have very strong anisotropy of the g-factor, which governs the EPR line width even at 100 Mcs. The anisotropy of the g-factor is apparently smaller in the Na_3OsCl_6 complexes than in the others. It is pointed out in the conclusion that in view of the strong dependence of the spin-lattice relaxation time on the concentration, it can be assumed that exchange pairs are produced in these glasses. The existence of these pairs in single-crystal $K_3(Fe, Co)(CN)_6$ was established earlier by A. M. Prokhorov and V. B. Fedorov (ZhETF v. 46, 1937, 1964). Orig. art. has: 1 figure, 1 formulas, and 1 table.

ASSOCIATION: Kazanskiy fiziko-tekhnicheskiy institut AN SSSR (Kazan' Physicotechnical Institute AN SSSR)

SUBMITTED: 20Nov64 ENCL: 00 SUB CODE: MP, SS

NR REF SOV: 003 OTHER: 004

Card 2/2

GOLENISHCHEV-KUTUZOV, V.A.; KHARAKHASH'YAN, E.G.

Nonresonance paramagnetic sound absorption due to spin-lattice relaxation. Fiz. tver tela 5 no.9:2725-2726 S '63. (MIRA 16:10)

1. Fiziko-tekhnicheskiy institut Kazanskogo filiala AN SSSR.

KHARAKHASH'YAN, G.

Development of the economy of the German Democratic Republic in the second five-year plan. Vop.ekon.no.7:132-140 Jl '56. (MLRA 9:9)
(Germany, East--Economic conditions)

KHARAKHASH'YAN, Grigoriy Mikhaylovich, kand.ekon.nauk; MAKAROV, V., red.; MOSKVINA, R., tekhn.red.

[Wages under capitalism] Zarabotnaia plata pri kapitalizme. Moskva, Izd-vo sotsial'no-ekon. lit-ry, 1958. 103 p. (MIRA 12:2)
(Wages)

MIROSHNICHENKO, Viktor Savvich, kand. ekon. nauk; KHARAKHASH'YAN, G.M., nauchnyy red.; MAKAROV, I.I., red.; NAZAROVA, A.S., tekhn. red.

[Toward new goals; a new stage in the development of the world-wide socialist system] Na novykh rubezhakh; novyi etap razvitiia mirovoi sotsialisticheskoi sistemy. Moskva, Izd-vo "Znanie," 1962. 29 p. (Novoe v zhizni, nauke, tekhnike. III Seriia: Ekonomika, no.8) (MIRA 15:5)
(Communist countries—Economic conditions)

BORISOV, Ye.F., dots.; BREGEL', E.Ya., prof.; BUKH, Ye.M., dots.; VASHENTSEVA, V.M., dots.; GOLEVA, Yu.P., kand. ekon. nauk; GOLEVA, A.P., kand. ekon. nauk; DEMOCHKIN, G.V., dots.; DONABEDOV, G.T., kand. ekon. nauk; YERMOLOVICH, I.I., dots.; KALYUZHNYY, V.M., dots.; KORNEYEVA, K.G., dots.; KUZNETSOVA, A.S., prof.; MIROSHNICHENKO, V.S., dots.; MYASNIKOV, I.Ya., kand. ekon. nauk; PIKIN, A.S., dots.; SIDOROV, V.A.; SMIRNOV, A.D., dots.; SOLOV'YEVA, K.F., dots.; SOROKINA, I.F., dots.; TARUNIN, A.F., kand. ekon. nauk; KHARAKHASH'YAN, G.M., prof.; MENDEL'SON, A.S., red.; SHVEYTSER, Ye.K., red.; ROTOVA, R.S., red.; GARINA, T.D., tekhn. red.

[Economics of socialism] Politicheskaia ekonomiia sotsializma. Moskva, Gos.izd-vo "Vysshaia shkola," 1963. 476 p. (MIRA 17:2)

ALEKSEYEVA, A.A.; ZAKSTEL'SKAYA, L.Ya.; KHARAKHASH'YAN, K.T.

Clinical aspects and treatment of influenza B during a winter outbreak. Sov.med. 24 no.11:90-96 N '60. (MIRA 14:3)

1. Iz kliniki virusnykh zabolevaniy (zav. - prof. N.V.Sergeyev) i laboratorii grippa (zav. - prof. V.M.Zhdanov) Instituta virusologii AMN SSSR (dir. - prof. P.N.Kosyakov).
(INFLUENZA)

EPSHTEYN, F.G.; SOROKINA, Ye.Yu.; KNYAZEVA, L.D.; ALEKSEYEVA, A.A.; SLEPUSHKIN, A.N.; KHARKHASH'YAN, K.T.; ORLOVA, N.N.

Clinical course of type C influenza in adults. Zhur. mikrobiol. epid. i immun. 31 no. 10:71-76 O '60. (MIRA 13:12)

1. Iz kliniki Instituta virusologii AMN SSSR na Baze 2-y klinicheskoy infektsionnoy bol'nitsy.

(INFLUENZA)

KITELADZE, Ye.S.; EPSHTEYN, F.G.; ALEKSEYEVA, A.A.; SOROKINA, Ye.Yu.; KNYAZEVA, L.D.; LOZHKINA, A.N.; ZAKSTEL'SKAYA, L.Ya.; KHARAKHASH'YAN, K.T.

Clinical and virological study of influenza during the 1959 winter outbreak. Vop. virus. 6 no.5:629-630 '61. (MIRA 15:1)

1. Institut virusologii imeni D.I.Ivanovskogo AMN SSSR, Moskva.
(INFLUENZA)

KHARAKHNIN, A.

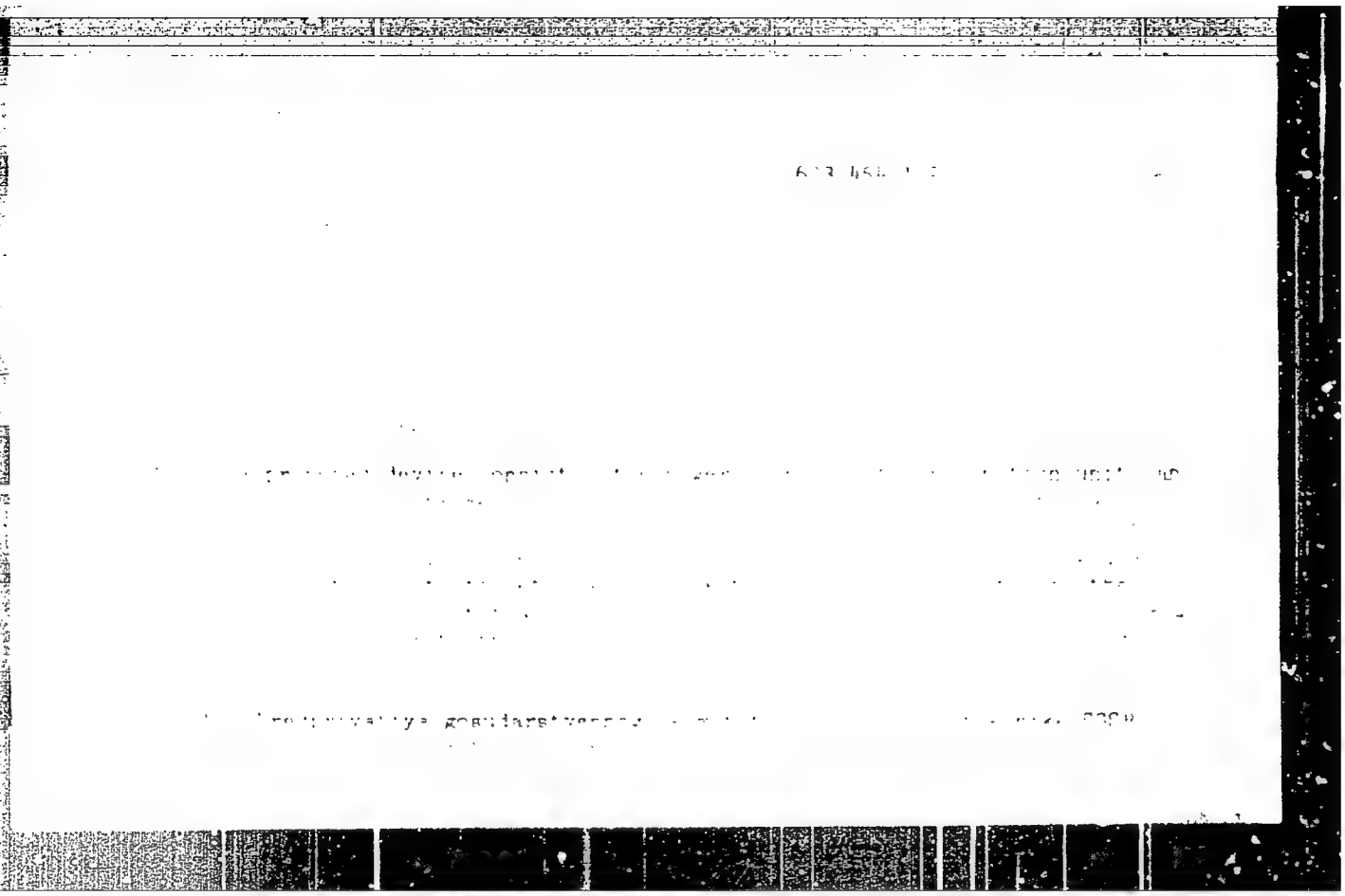
Use of the P-332 magnetic starter in charging storage batteries.
Muk.-elev.prom. 21 no.4:18 Ap '55. (MLRA 8:7)

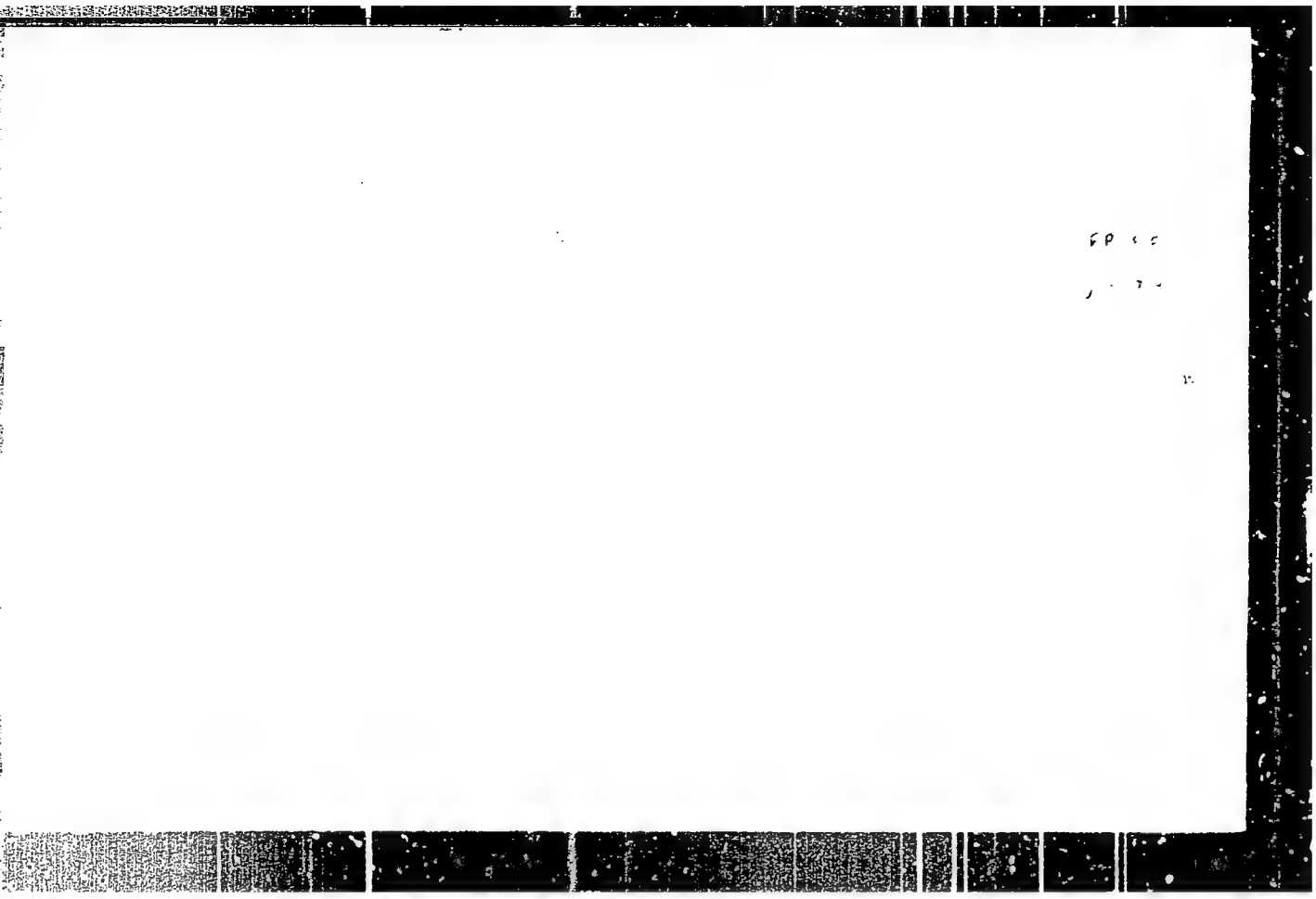
1. Ashkhabadskaya mel'nitsa no.8.
(Storage batteries)

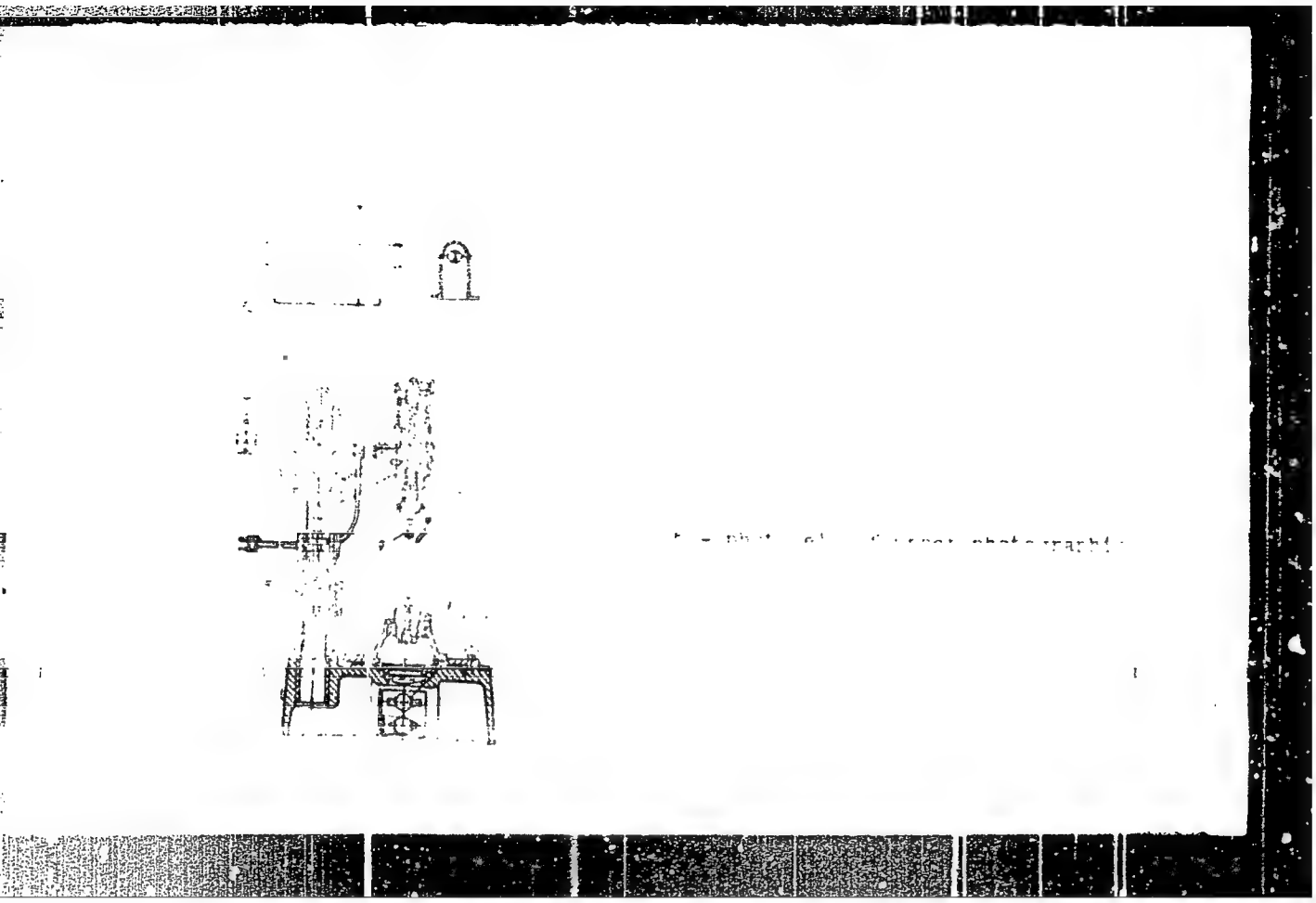
KHARAKHNIN, A.V.

Work practice with electrostatic precipitators of the C-180 type.
Koks i khim. no.4:52 '60. (MIRA 13:6)

1. Cherepovetskiy metallurgicheskiy zavod.
(Cherepovets--Coke industry--Equipment and supplies)







KHARAKHNINA, Ye. G.

Biological activity of depressor substances of animal origin. E. L. Pravotorova and E. G. Kharaknina. *Doklady Akad. Nauk S.S.S.R.* 93, 1127-9(1953).—The pancreas of animals (cattle, dogs) secretes a depressor substance which when injected intravenously into rabbits or dogs leads to a decline in blood pressure (57 mm. in systolic and 38 in diastolic) which lasts for 0.5-3.0 hrs. or longer. Typical blood pressure charts are shown. G. M. K.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Biological Chemistry

KHARAKHINOV, M.K.

Dynamics of air pollution in Moscow from 1948 to 195[illegible]. Uch. zap. Mosk. nauch.-issl. inst. san. i gig. no.6:36-40 '60. (MIRA 14:11)
(MOSCOW--AIR--POLLUTION)

KHARAKHONYCHEV, V.P., gornyy inzhener.

Concrete filling in a chamber and pillar mining system; from "Mining Engineering" July 1955. Gor.zhur. no.6:60-61 Je '56. (MLRA 9:8)

(Finland--Mining engineering)

KHARAKHONYCHEV, V.P., gornyy inzhener.

Replacing blocks in room and pillar mining by concrete pillars. (MLRA 10:8)
Gor.zhur. no.6:17-21 Je '57.

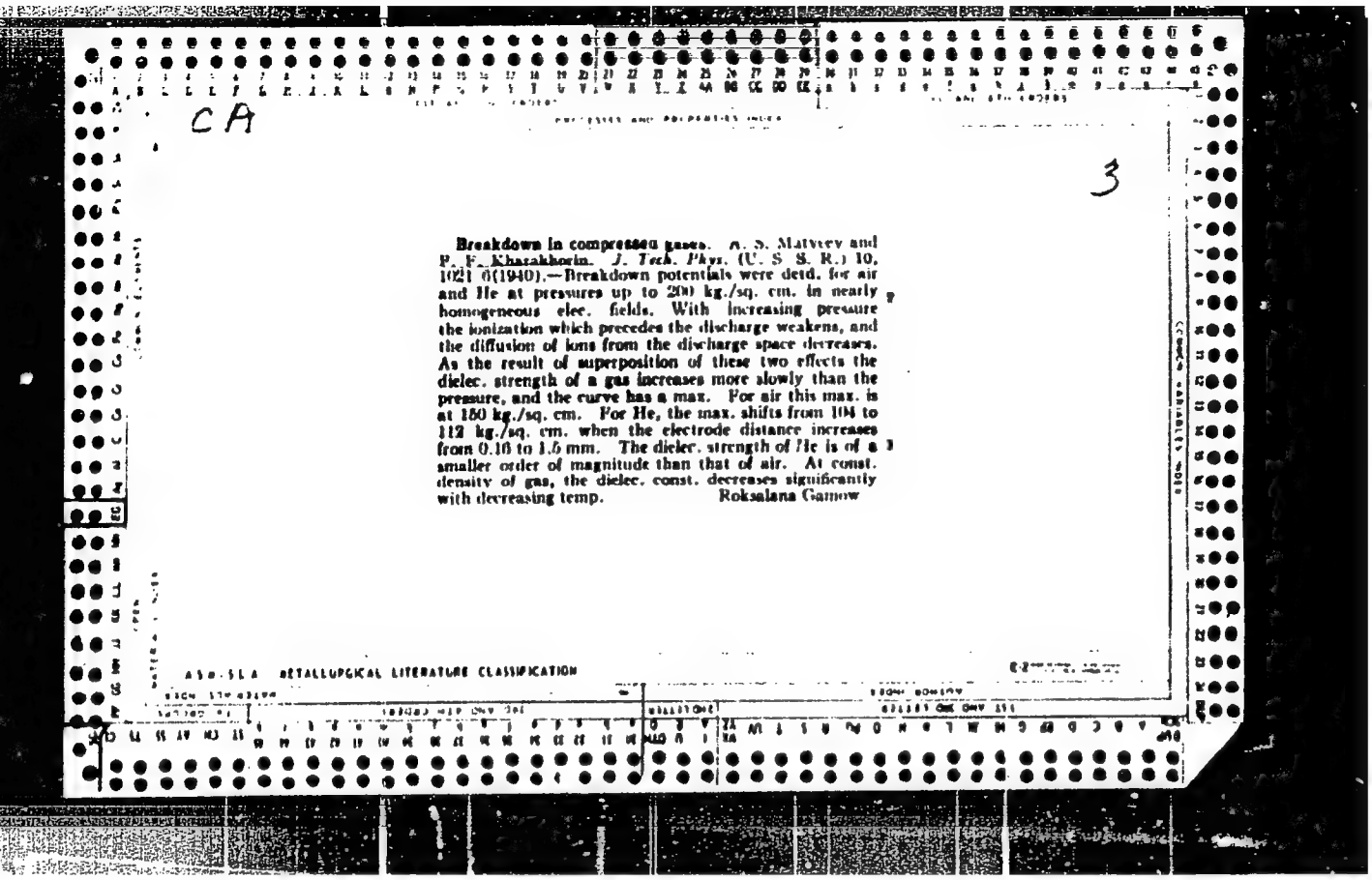
1.Unipromed'.

(Mining engineering)
(Columns, Concrete)

KHARAKLONYCHEV, V.P., gorn.inzh.

Ore drawing without chutes from stopes. Gor.zhur. no.6:31-32 Je '60.
(MIRA 14:2)

1. Unipromed', Sverdlovsk.
(Mining engineering)

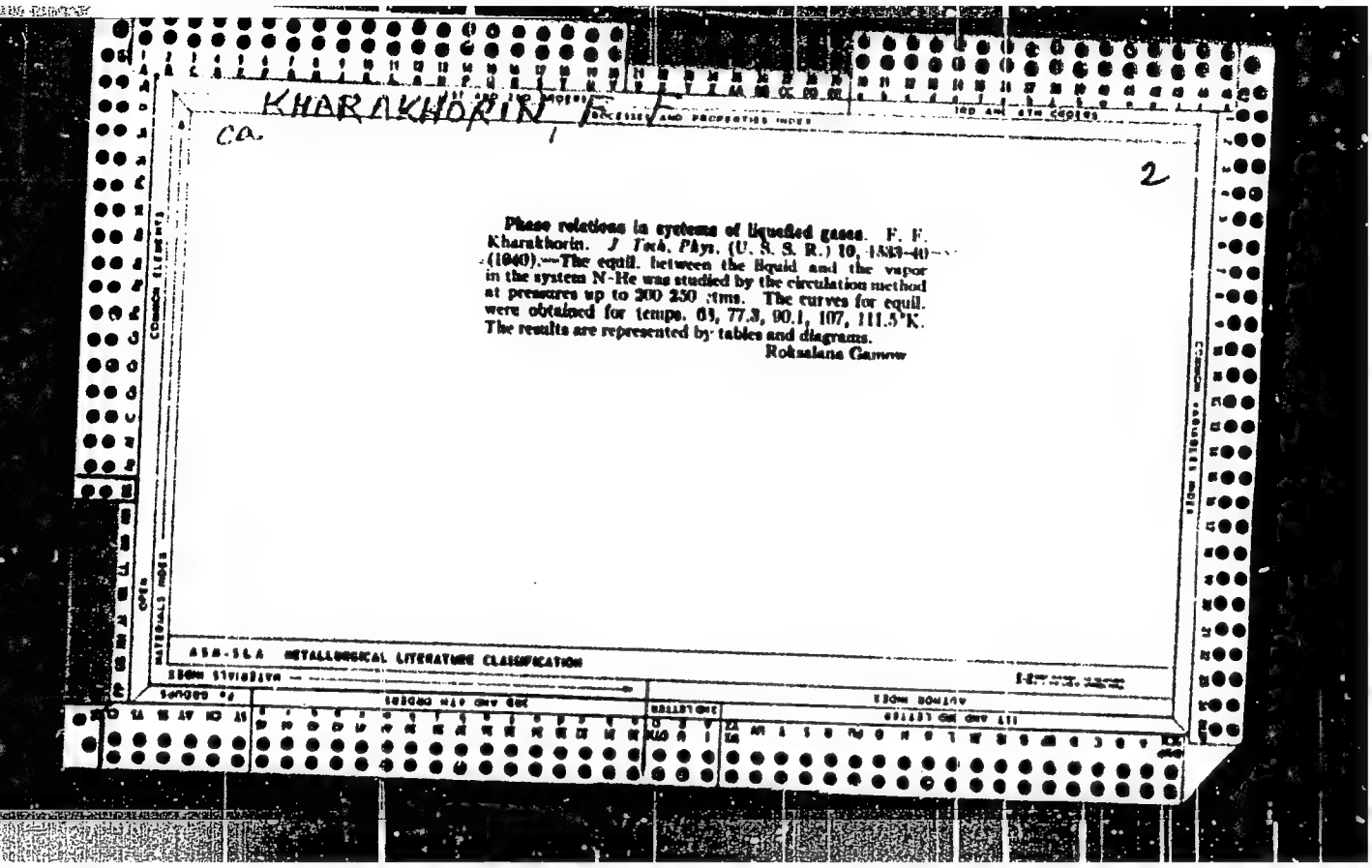


CA

3

Breakdown in compressed gases. A. S. Matveev and P. F. Khazakhorin. *J. Tech. Phys.* (U. S. S. R.) 10, 1021-6(1940).—Breakdown potentials were detd. for air and He at pressures up to 200 kg./sq. cm. in nearly homogeneous elec. fields. With increasing pressure the ionization which precedes the discharge weakens, and the diffusion of ions from the discharge space decreases. As the result of superposition of these two effects the dielec. strength of a gas increases more slowly than the pressure, and the curve has a max. For air this max. is at 150 kg./sq. cm. For He, the max. shifts from 104 to 112 kg./sq. cm. when the electrode distance increases from 0.16 to 1.5 mm. The dielec. strength of He is of a smaller order of magnitude than that of air. At const. density of gas, the dielec. const. decreases significantly with decreasing temp. Roksalana Gamow

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



KHARAKHORIN

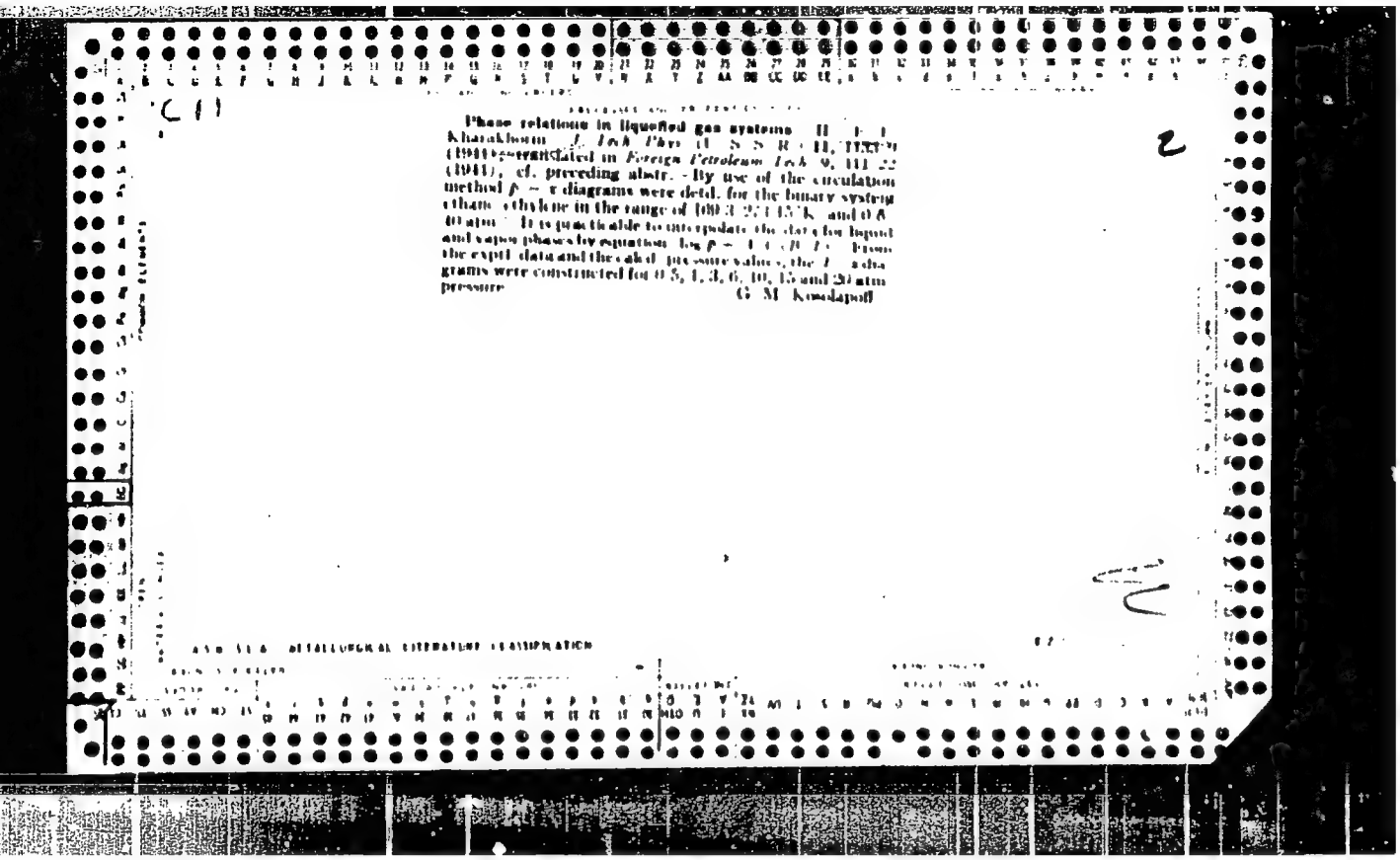
CA.

2

Phase relations in systems of liquefied gases. F. F. Kharakhorin. *J. Tech. Phys.* (U. S. S. R.) 10, 1433–40 (1940).—The equil. between the liquid and the vapor in the system N-He was studied by the circulation method at pressures up to 200 250 atms. The curves for equil. were obtained for temps. 63, 77.3, 90.1, 107, 111.5°K. The results are represented by tables and diagrams.

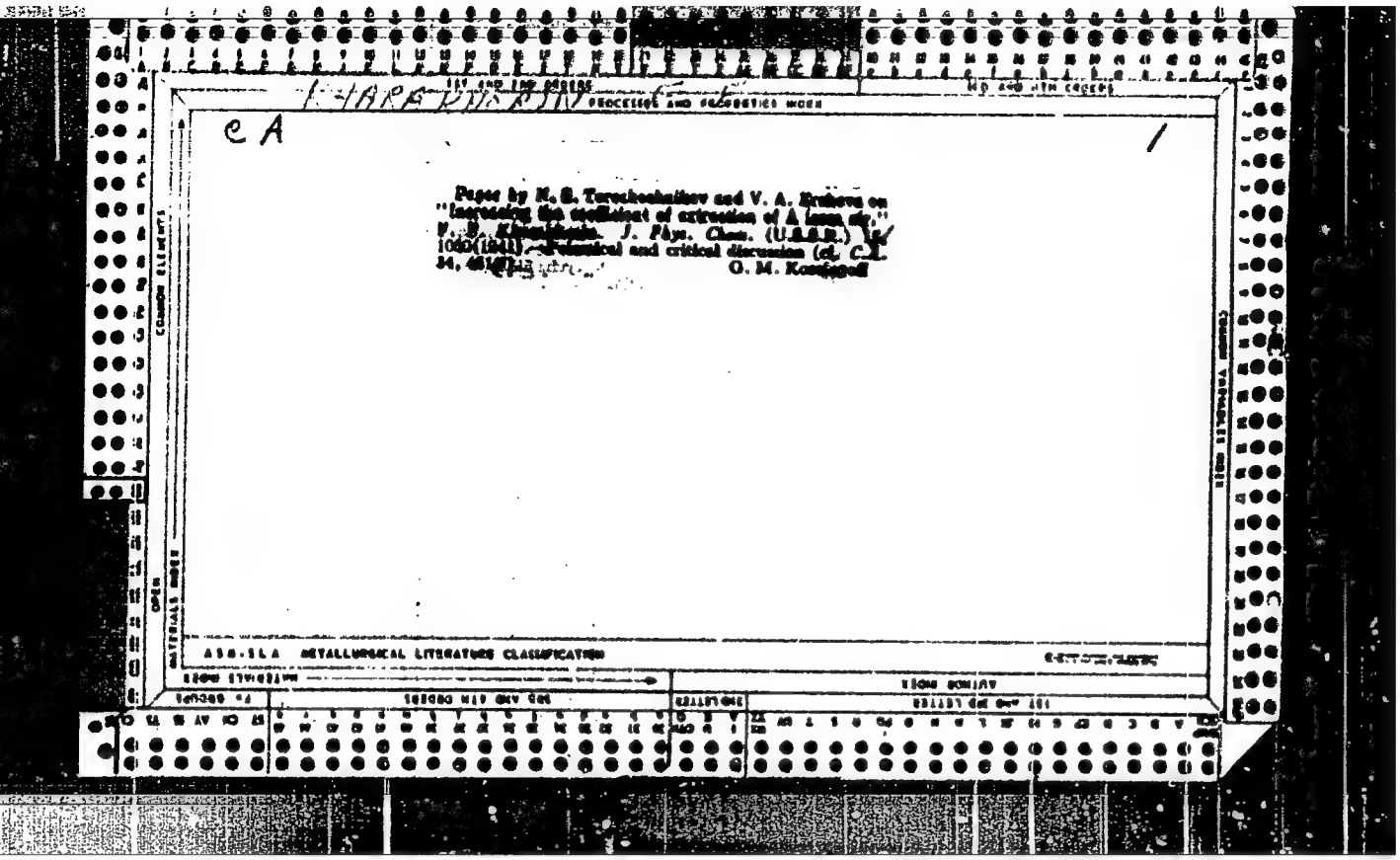
Roksalana Ganow

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Phase relations in liquefied gas systems. II. [illegible] Kharakhorin. *J. Tech. Phys. (U.S.S.R.)* 11, [illegible] (1941); reviewed in *Foreign Petroleum Tech.* 9, 111-22 (1941), cf. preceding abstr. - By use of the circulation method $p - v$ diagrams were detd. for the binary system ethane–ethylene in the range of 189.3–273.15°K. and 0.6–60 atm. It is practicable to interpolate the data for liquid and vapor phases by equation $\log p = [illegible]$. From the exptl. data and the calcd. pressure values, the J–x diagrams were constructed for 0.5, 1, 3, 6, 10, 15 and 20 atm pressure.

G. M. Kondapoff



KHARAKHORIN, F. F.

Name: KHARAKHORIN, F. F.

Dissertation: Liquid-vapor equilibrium in the systems nitrogen-helium, methane-helium, and ethane-ethylene

Degree: Cand Tech Sci

DEFENDED AT
Affiliation: Min Petroleum Industry USSR, All-Union Petroleum and Gas Sci Res Inst

PUBLICATION
Defense Date, Place: 1956, Moscow

Source: Knizhnaya Letopis', No 52, 1956

AL'TSHULER, G.T., KHARAKHORIN, F.F.

Study of selenium regeneration from alkaline solutions. Zhur. prikl. khim. v. 31 no.5:800-801 My '58. (MIRA 11:6)
(Selenium)

10(5)

SOV/170-59-5-8/18

AUTHOR: Kharakhorin, F.F.

TITLE: Equilibrium Between Liquid and Vapor in a Helium-Methane System (Ravnovesiye zhidkost'-par v sisteme geliy-metan)

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 5, pp 55-59 (USSR)

ABSTRACT: The paper contains description of an improved experimental method for determination of phase equilibria in the helium-methane system under low temperatures and pressures up to 170 atm. The circulation method of investigation applied by the author was already described by him in a previous paper [Ref 1]. The equilibrium between liquid and vapor was studied at temperatures of 91.1; 111.5; 137.0 and 150.3°K, and pressures from 5 to 170 atm. The analysis of the gas composition was performed by measuring the heat conductivity of gaseous mixtures. The results of measurements are presented in Table 1. They show that the lower the temperature, the higher is helium concentration in the gaseous mixture under any pressure. At pressures exceeding 30 or 35 atm the solubility of helium in methane is increasing with the raise of pressure and temperature. At lower pressures,

Card 1/2

SOV/170-59-5-8/18

Equilibrium Between Liquid and Vapor in a Helium-Methane System

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721810005

however, the isobar of the liquid phase passes through a maximum. Figure 2 pictures isobars for 12-atm pressure and other pressures. The existence of maximum solubility should be taken into consideration in chosing optimum conditions for helium separation. It was found that the properties of the helium-methane system are qualitatively analogous to the properties of the nitrogen-helium system. The solubility of helium in liquid nitrogen, however, is 7 to 8 times as high as its solubility in liquid methane. The author thanks Professor I.R. Krichevskiy for a number of valuable advices.
There are 2 graphs, 1 diagram, 2 tables and 10 references, 5 of which are Soviet, 1 American, 1 English, 1 German, 1 French and 1 Dutch.

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10(5)

05298
SOV/170-59-8-9/18

AUTHOR: Kharakhorin, F.F.

TITLE: The Liquid-Vapor Equilibrium in the Ethane-Ethylene System

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 8, pp 72 - 77 (USSR)

ABSTRACT: The paper contains data of the thermodynamical working out of experimental data obtained in the course of investigations into the liquid-vapor equilibrium of the ethane-ethylene system. These experimental data, described in reference 1, embrace the range of temperatures from 169.3 to 273.16°K, the range of pressures from 0.4 to 40.6 atm, and the range of concentrations from 100% ethylene to 100% ethane. The volatility of pure ethylene was calculated by the graphical integration of Equation 2 and the values obtained were compiled in Table 1. The volatility of ethylene in its double solution with ethane was calculated by Formula 1, making use of the values found from Table 1 and experimental data on the composition of the gaseous phase [Ref 1]. The results are presented in Figure 1, which shows that the solution of ethylene in liquid ethane is ideal throughout the whole range of concentrations within the range of temperatures investigated. The author concludes on the basis of the Gibbs-Dugueme equation, that ethane

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solution in liquid ethylene also obeys the law of ideal solution for all concentrations. On the basis of this conclusion, the author calculates the values of evaporation heat of ethylene and ethane from their double solutions and presents the results in Table 3 and 4 respectively.
There are: 3 graphs, 4 tables and 8 references, 3 of which are Soviet, 2 American, 2 English and 1 German.

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06562
SOV/170-59-9-3/18

10(5)

AUTHOR: Kharakhorin, F.F.

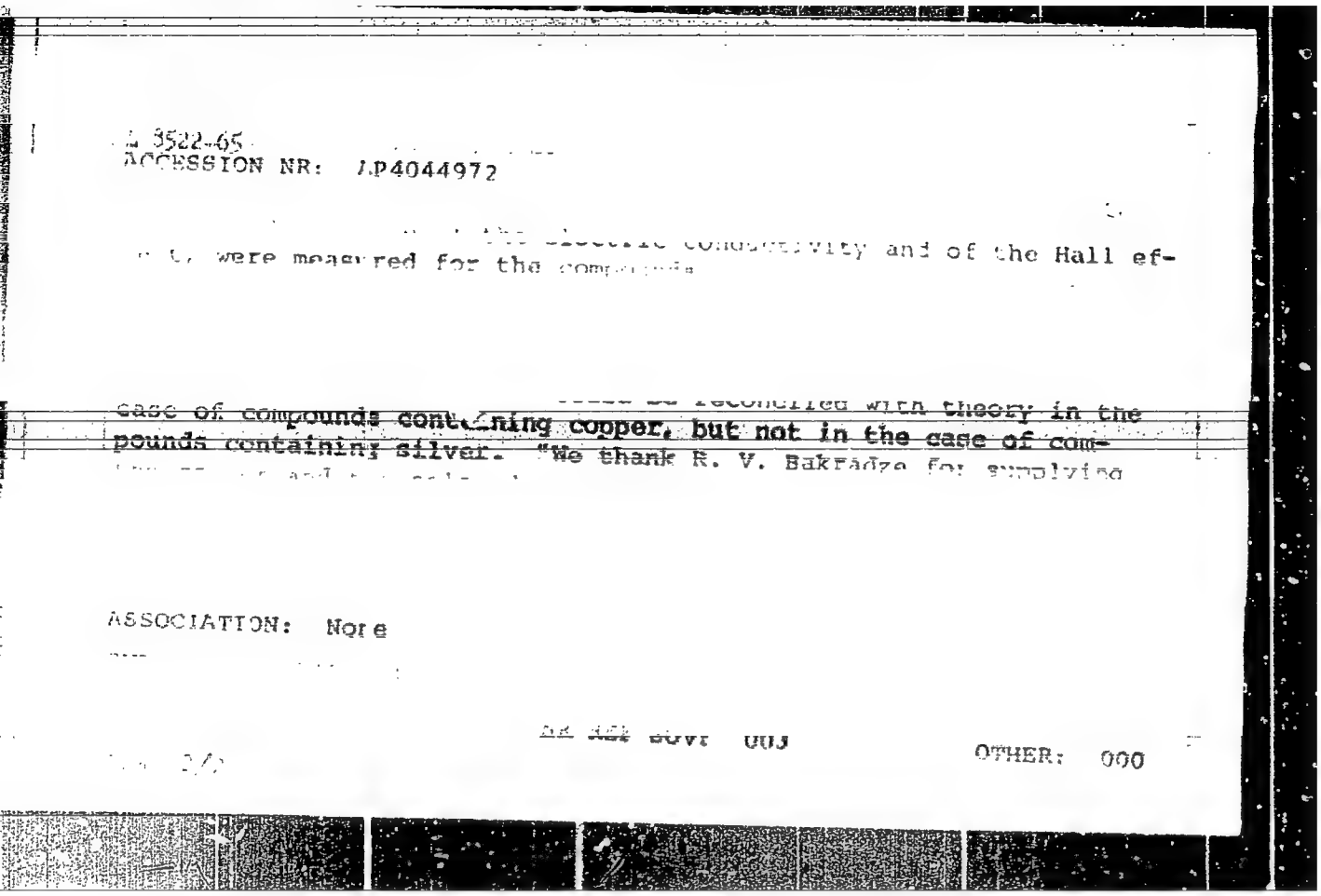
TITLE: Liquid-Vapor Equilibrium in Nitrogen-Helium and Helium-Methane Systems

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 9, pp 24-29 (USSR)

ABSTRACT: In this paper the author performed thermodynamical treatment of experimental data, obtained previously, on equilibrium in the nitrogen-helium and helium-methane systems. He calculated the volatility of pure helium at temperatures from 60 to 160°K and at pressures from 25 to 300 atm by Formula 4, derived from the Bitti-Bridgman equation in virial form, and the results are presented in Table 1. Then the volatility of helium in the gaseous phase in the mixtures with nitrogen and methane was determined by Formula 2, and the data obtained were used for plotting the graphs of the both systems helium-liquid nitrogen and helium-liquid methane, shown in Figure 1 and 2 respectively. As it is shown by examining the graphs, at pressures exceeding 40 - 45 atm the data are satisfactorily represented by straight lines, whereas at lower pressures experimental points lie below them; thus it is proven thereby that at pressures from 40 - 45 to 215 atm the solubility of helium in liquid nitrogen and methane can be calculated by the Krichevskiy-Kazarnovskiy

Card 1/2

TITLE: Semiconductor properties of compounds of the type $A^{I}_{2}B^{IV}C^{VI}_{3}$



L 3522-65
ACCESSION NR: AP4044972

... were measured for the compounds ... electric conductivity and of the Hall ef-

... case of compounds containing copper, but not in the case of compounds containing silver. ... reconciled with theory in the ... We thank R. V. Bakradze for supplying ...

ASSOCIATION: None

... SUBM: 00J OTHER: 000

KHARAKHORIN, F.F.; PETROV, V.M.

Semiconducting properties of $A_2^{I}B^{IV}C_3^{VI}$ type compounds. Fiz. tver. tela 6 no.9:2867-2869 S '64. (MIRA 17:11)

L 5247-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACC NR: AP5026403 SOURCE CODE: UR/0386/65/002/006/0262/0266

AUTHOR: Kurbatov, L. N.; Khalilov, P. A.; Susov, Ye. V.; Kharakhorin, F. F.

ORG: none

TITLE: The influence of superhigh-frequency radiations on the electrical conductivity of p-type indium antimonide

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 6, 1965, 262-266

TOPIC TAGS: radiation effect, electrical conductivity, indium antimonide, field effect

ABSTRACT: The reduction of d-c electrical conductivity caused by super-high frequency irradiation of a density of $P = 10^{-6}$—10^{-7} w-mm^{-2} in p-type single crystalline indium antimonide has been investigated. The sample had a Hall carrier density of 7×10^{12} to 4×10^{14} cm^{-3}, a Hall mobility of 2×10^{3}—1×10^{4} cm^{2}/volt^{-1} sec^{-1}, and a specific resistance of 4—100 ohm-cm in the range of wavelengths $\lambda = 2$—30 mm, at temperatures of 77—150K. The volt-ampere characteristic is a straight line, the slope of which does not depend on the current's direction. The curves of the temperature dependence of the response indicate that the upper limit of the effect (130—140K) coincides with the transition region of the semiconductor from hole to electron conductivity. The effect is apparently neither bolometric nor photovoltaic, but may be produced by

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L 5147-66

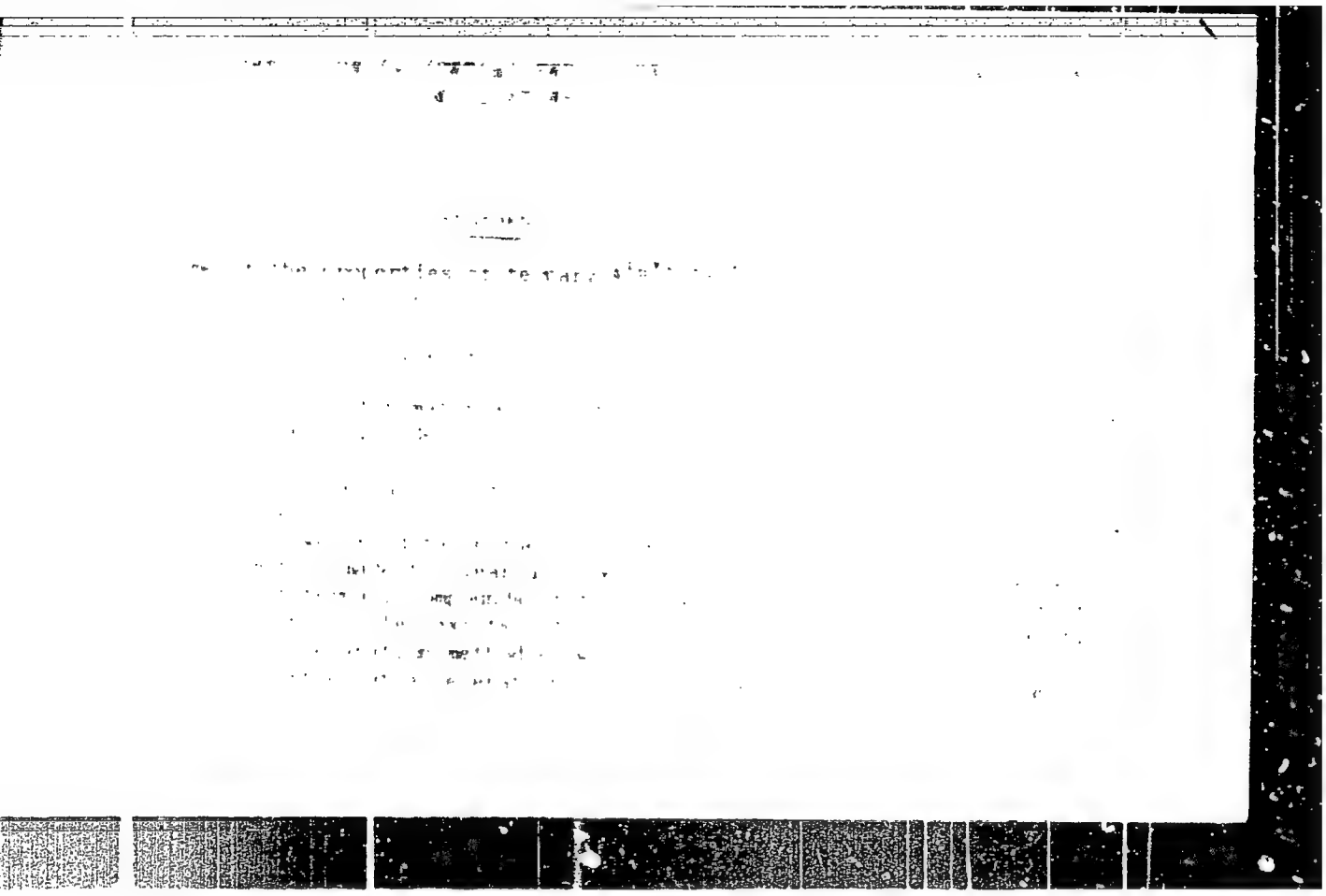
ACC NR: AP5026403

the direct influence of the super-high frequency field on the conductivity of the sample. Orig. art. has: 3 figures.

[ZL]

SUB CODE: SS,EM/SUBM DATE: 12Jul65/ ORIG REF: 003/ OTH REF: 002/ ATD PRESS:4173/

Card 2/2



our sincere gratitude to M. F. Poluboyarinova for making the electrical and physical measurements, and also to V. I. Pochtarev and R. P. Gurova for the x-ray [illegible] analysis." Orig. art. has: 5 figures.

SUBMITTED: 05Oct62 ENCL: 01 SUB CODE: EC, SS

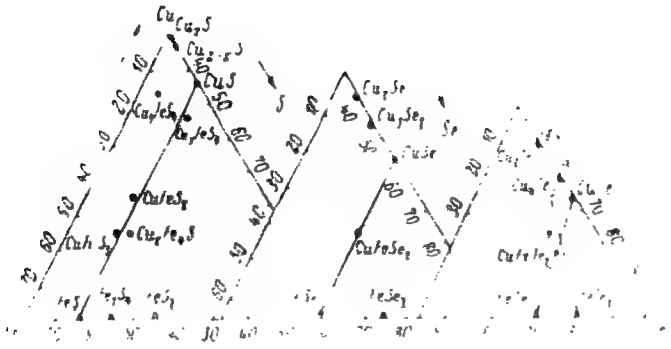


Fig. 1. Phase diagrams of the Cu-Fe-S (Se; Te) systems.

EAS

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L 13110-66 EWT(m)/ETC(F)/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD
ACC NR: AP5025784 SOURCE CODE: UR/0363/65/001/009/1502/1505

AUTHOR: Kharakhorin, F. F.; Gambarova, D. A.; Aksenov, V. V.

ORG: none

TITLE: Diffusion and solubility of gold in lead selenide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 9, 1965, 1502-1505

TOPIC TAGS: gold, lead compound, selenide, metal diffusion, solubility

ABSTRACT: Gold labeled with Au^{198} was deposited chemically on *p*-type lead selenide, and the samples were subjected to diffusion annealing at 300-500°C for 15 min to 20 hr. The distribution of gold was then determined by recording the gamma radiation of successively removed layers. The temperature dependence of the diffusion coefficient followed the equation

$$D = 5.6 \cdot 10^{-2} \exp\left(\frac{0.75}{kT}\right) \text{cm}^2/\text{sec}$$

The temperature dependence of the solubility of gold in lead selenide was also determined. Solubility increases with temperature in the 350--600°C range. Above 650°C, the intermediate phase Au_2Pb is formed. As

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L 13110-66

ACC NR: AP5025784

in germanium and silicon, gold in lead selenide has an anomalously rapid diffusion rate. For this reason and because of the relatively low activation energy, it is postulated that the diffusion of gold in lead selenide takes place mainly in the interstices. Orig. art. has: 5 figures, 3 formulas.

SUB CODE: 07/ SUBM DATE: 15May65/ OTH REF: 003/ OTH REF: 001

Card 2/2 HW

L 13109-66 EWT(m)/ETC(F)/EWG(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) RDW/JD

ACC NR: AP5025785 SOURCE CODE: UR/0363/65/001/009/1506/1507

AUTHOR: Kharakhorin, F. F.; Gambarova, D. A.; Aksenov, V. V.

ORG: none

TITLE: Diffusion of tin in lead selenide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 9, 1965, 1506-1507

TOPIC TAGS: metal diffusion, tin, lead compound, selenide, single crystal, electrodeposition

ABSTRACT: Tin labeled with $Sn^{113+123}$ was electrodeposited on n-type lead selenide single crystals. Diffusion annealing lasting from 0.5 to 37 hr was carried out at 510-880°C in quartz ampoules filled with argon at 0.5 atm. Layers from 10 to 50 μ thick were then removed and their radioactivity was determined. The diffusion coefficients are given by the equation

$$D = 1{,}2 \cdot 10^{-4} \exp\left(-\frac{0{,}81}{kT}\right), \ \text{cm}^2/\text{sec}$$

Their values ranged from $5.5 \cdot 10^{-12}$ to $3.4 \cdot 10^{-10}$ cm^2/sec in the tempera-

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L 13109-66

ACC NR: AP5025785

ture range studied. It is postulated that the diffusion takes place in lead vacancies. Orig. art. has: 2 figures, 1 formula.

SUB CODE: 07/ SUBM DATE: 15May65/ ORIG REF: 002/ OTH REF: 000

Card 2/2

KHARAKHORIN, F.F., BOYARINTSEV, P.K., PETROV, V.M.

Alloys of the composition $Cd_{0,05}Hg_{0,95}Te$. Izv. AN SSSR. Neorg. mat. 1 no.12:2167-2169 D '65. (MIRA 18:12)

1. Submitted July 6, 1965.

L 12741-66 EWT(m)/EWG(f)/EWO(m)/EWP(t)/EWP(b) IJP(c) RM/JD

ACC NR: AP5000842 SOURCE CODE: UR/0181/65/007/012/3481/3484

AUTHORS: Kharakhorin, F. F.; Gambarova, D. A.; Akhenov, V. V.

ORG: None

47

TITLE: Diffusion and solubility of copper in lead selenide

SOURCE: Fizika tverdogo tela, v. 7, no. 12, 1965, 3481-3484

TOPIC TAGS: physical diffusion, copper, lead compound, single crystal, selenide, semiconductor conductivity, solubility

ABSTRACT: This is part of a systematic investigation of diffusion and the solubility of impurities in chalcogenides of lead. The article reports the results of the behavior of copper in single-crystal lead selenide at temperatures 93 -- 520C. The tests were made on lead selenide previously synthesized by the Bridgman-Stockbarger method in quartz ampoules of special shape. The single crystals were grown 11 -- 15 mm in diameter and up to 60 mm long. The crystals were cut perpendicular to the generatrix into discs 1 -- 2 mm thick. The measured samples were of the n-type conductivity with specific resistivity ~4 x 10^{-3} ohm-cm and carrier density ~4 x 10^{18} cm^{-3}. The diffusion coeffi-

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L 12741-66

ACC NR: AP5000842 O

cients were determined with the aid of radioactive Cu^{64} by successive removal of layers. The results show that at 93 -- 520C the diffusion obeys the equation $B = 2 \times 10^{-5} \exp(-0.31/kT)$ cm^2/sec, and apparently occurs in the interstices. The solubility has a retrograde character with a maximum value of 9×10^{18} at/cm^3 at ~800C. The interstitial character of the diffusion is deduced from the large diffusion rate, the low activation energy (0.31 ev). Orig. art. has: 3 figures and 1 formula.

SUB CODE: 20/ SUBM DATE: 01Apr65/ ORIG REF: 006/ OTH REF: 011

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Card 2/2

SCHASTLIVYY, V.P.; KHARAKHORIN, F.F.

Properties of ternary chalcogenide compounds of the AIB VIII X_2 VI-type after centrifugation. Zhur. prikl. khim. 38 no.3:515-520 Mr '65. (MIRA 18:11)

1. Submitted October 5, 1962.

(A) L 13564-66 EWT(m)/ETC(F)/EWG(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c)

ACC NR: AP6001234 SOURCE CODE: UR/0363/65/001/012/2167/2169

RDW/JD

AUTHOR: Kharakhorin, F. F.; Boyarintsev, P. K.; Petrov, V. M.

ORG: none

TITLE: Study of alloys of the $Cd_{0.05}Hg_{0.95}Te$ system

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 12, 1965, 2167-2169

TOPIC TAGS: cadmium alloy, mercury alloy, tellurium alloy, semiconductor alloy, electric conduction, photoconductivity, photo emf, photomagnetic effect, single crystal growth, absorption coefficient, temperature dependence, spectral distribution

ABSTRACT: Polycrystalline ingots of the alloy $Cd_{0.05}Hg_{0.95}Te$ were synthesized from cadmium telluride and mercury telluride and used to grow single crystals by Bridgman's method. The temperature dependence of the electrical conductivity and Hall coefficient were determined. All the samples had n-type conductivity at room temperature; at liquid nitrogen temperature, most displayed p-type conductivity, but the purest ones had n-type conductivity and an acceptor concentration of 10^{18} cm^{-3}. The spectral distribution of the absorption coefficient was measured on polished samples 0.1 — 0.2 mm thick. The dependence of this coefficient on the photon energy in the 0.13 — 0.16 eV range permitted the calculation of the "optic" energy gap, which amounted to about 0.07 eV at room temperature. The photoconductivity, photo-emf, and photomagnetic effect were also measured on some samples at room and liquid nitrogen temperatures. A change in the cooling conditions (immersion in water)

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ACC NR: AP6001234

showed that the photothermomagnetic effect prevails at room temperature. At 77K, the ratio of electron to hole mobility for a series of p-type samples is about 80, and the carrier lifetime calculated from data on the photomagnetic effect is less than 10^{-10} sec. Authors thank D. I. Arnol'd for his participation in the measurements. Orig. art. has: 3 figures.

SUB CODE: 11, 20 / SUBM DATE: 06Jul65 / ORIG REF: 001 / OTH REF: 004

L 18063-66 EWT(1)/EWT(m)/T/EWP(t) IJP(c) JD

ACC NR: AP6003361 SOURCE CODE: UR/0363/66/002/001/0032/0036

AUTHOR: Kharakhorin, F. F.; Poluboyarinova, M. F.; Vinogradova, V. G. 56 8

ORG: none

21,44,55

TITLE: Effect of certain factors on the process of change of the conductivity sign during thermal treatment of n-InSb

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 1, 1966, 32-36

TOPIC TAGS: electric conductivity, indium compound, antimonide, metal diffusion

ABSTRACT: The study was made in order to determine the effect of thermal treatment under various conditions on the properties of n-type indium antimonide. Under suitable conditions of treatment (temperature, annealing time) in quartz ampoules (in a vacuum, in helium, krypton, and antimony vapor), the n-InSb samples with carrier concentrations of 10^{13}–10^{14} cm^{-3} change their conductivity to hole conductivity over their entire volume while keeping approximately the same carrier concentration. The complex process of n-p transformation of InSb is thought to be due to the simultaneous and probably mutual influence of three factors, of which the

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L 18063-66
ACC NR: AP6003361

predominant one is the migration of rapidly diffusing acceptor impurities over the surface and volume, the two others being the exodiffusion of antimony giving rise to acceptor levels in the sample, and the exodiffusion of indium. From the rate of displacement of the front of sign change, the limits of the diffusion coefficients of acceptor impurities were found to be $2.5--7.0 \times 10^5$. On the basis of these values, it is concluded that copper is the main impurity responsible for the process of conductivity sign inversion in indium antimonide. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 11,20 / SUBM DATE: 26Jun65 / ORIG REF: 007 / OTH REF: 004

Card 2/2 SNC

L 17407-66 EWT(m)/EWG(m)/EWP(t)/ETC(f) IJP(c) RDW/JD

ACC NR: AP6007247 SOURCE CODE: UR/0363/66/002/002/0245/0248

AUTHOR: Kharakhorin, F. F.; Glukhov, A. A.; Kuznetsova, Ye. S.; Potapov, V. I. 51

ORG: none

TITLE: Some properties of tellurium doped indium and gallium arsenides 55,27 55,27 55,27

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 2, 1966, 245-248

TOPIC TAGS: semiconducting material, gallium arsenide, indium compound, indium arsenide, single crystal, electric property, activated crystal, tellurium activator

ABSTRACT: Electron carrier concentration in relation to Te dopant content in the charge and Hall mobility of electrons in relation to the carrier concentration have been studied in indium arsenide and gallium arsenide single crystals grown by the Czochralski-Gremmelmayer technique and, in the case of GaAs, by oriented crystallization. This latter technique was used to exclude interference of Si acceptor impurity (from the quartz container) with electrical characteristics of GaAs. In the Czochralski process, 99.999% Te was introduced directly into the melt. Hall coefficient and resistivity were measured at 300K. In both indium and gallium arsenides, carrier concentration increased with the increase in Te content of the charge up to a certain value ("saturation" point), then leveled off. However, the "saturation" point was reached with ten times higher Te content in InAs than in GaAs.

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L 17407-66
ACC NR: AP6007247

Consequently, the limit (maximum) carrier concentration was about an order of magnitude higher in InAs than in GaAs ($\sim 2 \times 10^{19}$ versus 3.1×10^{18} at/cc). These data were in satisfactory agreement with the literature. Presumably, the "saturation" in carrier concentration was reached at a point when Te atoms form electrically inactive Te-Te bonds. The Hall mobility in both arsenides studied displayed a similar pattern of gradual decrease with increased concentration. A wide dispersion of mobility data at a given carrier concentration for GaAs crystals prepared by Czochralski technique and by oriented crystallization was explained by the compensating effect of the uncontrollable acceptor impurity. Orig. art. has: 5 figures. [JK]

SUB CODE: 20 SUBM DATE: 12Jul65/ ORIG REF: 002/ OTH REF: 007/ ATD PRESS: 4206

Pure metal 44,18

Card 2/2

KURBATOV, L.N.; KHALILOV, P.A.; SUSOV, Ye.V.; KHARAKHORIN, F.F.

Effect of ultrahigh-frequency radiation on n-type indium antimonide. Fiz. v red. Zhur.eksper. i teor.fiz. 2 no.6:262-266 S '65. (MIRA 18:12)

I. Submitted July 12, 1965.

KHARAKHORIN, F.F.: GAMBAROVA, D.A.; AKSENOV, V.V.

Copper diffusion and solubility in lead selenide. Fiz. tver. tela 7 no. 12:3481-3484 D '65 (MIRA 19:1)

L 20626-66 EWT(m)/EWP(t) IJP(c) JD
ACC NR: AP6011317 SOURCE CODE: UR/0363/66/002/003/0461/0463

AUTHOR: Kharakhorin, F. F.; Kuznetsova, Ye. S.; Potapov, V. I.; Glukhov, A. A.

ORG: none

TITLE: Relation between mobility and concentration of carriers in indium arsenide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 3, 1966, 461-463

TOPIC TAGS: indium compound, arsenide, indium arsenide, semiconductor single crystal, electron mobility, carrier concentration

ABSTRACT: Variations of Hall mobility at different carrier (electron) concentrations ($n = N_D + N_A$) in the $4 \cdot 10^{15}$—10^{17}/cc range have been studied at 300K in indium arsenide, as one of the most promising $A^{III}B^{V}$ compounds. The theoretical plot of mobility versus n was calculated using the Brooks formula for uncompensated ($N_A = 0$) and compensated materials which cover concentration regions with nondegenerated and weakly degenerated states, respectively. Comparison was made of the calculated data with the experimental data from literature and with the authors' own data. The latter were obtained with single

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ACC NR: AP6011317

crystals grown either by oriented crystallization or by Czochralski-Gremmelmayer technique. Most of the data for the samples grown by the first technique ($n = 3 \cdot 10^{16} - 8 \cdot 10^{16}$/cc and mobility = 29,700 — 22,000 $cm^2/v/sec$) were in agreement with the calculated data. Data obtained with the samples grown by Czochralski technique ($n = 5 \cdot 10^{16} - 10^{17}$/cc and mobility = 24,300—20,000 $cm^2/v/sec$) were somewhat lower and the literature data were considerably lower than theoretical. The discrepancy between thecretical and some of the experimental data was attributed to a variable degree of compensation by impurities. Orig. art. has: 2 figures and 3 formulas.

[JK]

SUB CODE: 20/ SUBM DATE: 12Jul65/ OTH REF: 008/ ATD PRESS: 4225

Card 2/2

L 32043-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6013335 SOURCE CODE: UR/0363/66/002/004/0582/0584

AUTHOR: Kharakhorin, F.F.; Kuznetsova, Ye. S.; Glukhov, A.A.; Potapov, V.I.

ORG: none

TITLE: Purification of arsenic by sublimation

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 4, 1966, 582-584

TOPIC TAGS: arsenic, sublimation, metal purification

ABSTRACT: A process and the corresponding equipment have been developed for purifying arsenic by sublimation. Usually, one or two sublimations are performed, impurities of low vapor pressure such as copper, iron, and aluminum being thus removed. More sublimations are required to remove impurities having a substantial vapor pressure (zinc, cadmium, sulfur, selenium, tellurium). The process avoids contamination of the arsenic by eliminating its transfer from one ampoule to another. Radioactivation analysis has shown that after 4-5 sublimations, for a threefold decrease in the total impurity content, the amount of sulfur decreased by a factor of 6 — 10. Arsenic obtained after five sublimations was used to synthesize indium arsenide with a carrier concentration of $4 \times 10^{16} cm^{-3}$ and a mobility of 29,000 cm^2/V sec at 300K, which also indicates that the

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ACC NR: AP6013335

total impurity content decreased by a factor of about 3. Orig. art. has: 4 fig. and 1 table.

SUB CODE: 11 / SUBM DATE: 14May65 / ORIG REF: 001 / OTH REF: 002

Card 2/2

L 32057-66 EWT(m)/EWP(t)/ETI IJP(c) RDW/JD

ACC NR: AP6013355 (N) SOURCE CODE: UR/0363/66/002/004/0772/0774

72
69
B

AUTHOR: Annamamedov, R.; Berger, L. I.; Petrov, V. M.; Kharakhorin, F. F.

ORG: Institute of Chemical Reagents and High-Purity Substances, Moscow (Institut khimicheskikh reaktivov i osobo chistykh veshchestv)

TITLE: Optical and photoelectric properties of the ternary semiconducting compounds Cu_3AsSe_4 and Cu_3SbSe_4

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 4, 1966, 772-774

TOPIC TAGS: copper compound, arsenic compound, selenium compound, antimony compound, semiconductor crystal, photoconductivity, forbidden zone width

ABSTRACT: Continuing their systematic investigations of ternary semiconducting compounds of diamondlike structure, the authors undertook a study of the spectral distribution of diffuse reflection and photoconductivity of the compounds Cu_3AsSe_4 and Cu_3SbSe_4, polycrystalline samples being used. The apparatus for measuring the distribution of diffuse reflection and the spectral distribution of the photoconductivity is described. The shape of the curves of diffuse reflection show that the compounds studied are semiconductors. At room temperature, the forbidden gap width determined from the start of the linear segment is 0.88 eV for Cu_3AsSe_4 and 0.31 eV for Cu_3SbSe_4. Only the latter compound displayed photoconductivity; its forbidden gap width at 77K is about 0.65 eV, as determined from the spectral characteristic of the photoconductivity. The results indicate that the replacement of the relatively light arsenic atoms by

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ACC NR: AP6013355

heavier atoms (antimony) in the lattice of an $A_3^{I}B^{V}C_4^{VI}$-type compound leads to a decrease of the forbidden gap width. The authors are sincerely grateful to N. A. Goryunova for interest in this work and to L. A. Zheleznaya and S. N. Mikhaleva for participating in the experiments. Orig. art. has: 4 figures.

SUB CODE: 07,20 SUBM DATE: 19Jun65 / ORIG REF: 003 / OTH REF: 002

Card 2/2

L 26752-66 EWT(m)/T/EWP(t) IJP(c) JD

ACC NR: AP6011482 SOURCE CODE: UR/0070/66/011/002/0352/0354

AUTHOR: Bovina, L. A.; Vinogradova, V. G.; Poluboyarinova, M. F.; Smirnova, Ye. A.; Khakhorin, F. F.

ORG: none

TITLE: Sectorial structure of single crystals of indium antimonide doped with germanium

SOURCE: Kristallografiya, v. 11, no. 2, 1966, 352-354

TOPIC TAGS: indium compound, antimonide, electric conductivity, thermal emf, crystal structure, single crystal, semiconductor conductivity, crystal growth

ABSTRACT: The authors investigated the transverse inhomogeneity in the conductivity in single crystals of indium antimonide doped with germanium to an excess-acceptor density 10^{12}--10^{14} cm^{-3}. The crystals were grown by the Czochralski method in the [111] and [211] directions at an inert gas pressure of 600 mm Hg. The conductivity inhomogeneity was determined from the sign of the thermal emf measured at liquid-nitrogen temperature. Most crystals grown in the [111] direction had n-type regions in the center and most frequently in the uppermost section of the crystal. With increasing crystal length, the entire section assumes a p-type conductivity and only a narrow ring of n-type (0.1--0.2 mm) appears on the edges of the plates cut from the crystal. In the [211] direction only peripheral n-type regions are produced. The results are attributed to the banding of the crystallization front and to varia-

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ACC NR: AP6011482 O

tion of the ratio of the effective donors through the volume of the crystal. It is therefore concluded that the inhomogeneities in the conductivity type in the transverse direction of weakly doped single crystals are due to residual donor impurities. Orig. art. has: 3 figures and 1 formula.

SUB CODE: 20/ SUBM DATE: 07Jan65/ ORIG REF: 001/ OTH REF: 002

Card 2/2 FV

L 42161-66 EWP(j)/EWT(m)/T RM/HH

ACC NR: AP6021608 SOURCE CODE: UR/0020/66/168/005/1082/1084

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36
B

AUTHOR: Terent'yev, A. P. (Corresponding member AN SSSR); Rukhadze, Ye. G.; Kharakhorin, F. F.; Petrov, V. M.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Diffuse reflection spectra of polychelates

SOURCE: AN SSSR. Doklady, v. 168, no. 5, 1966, 1082-1084

TOPIC TAGS: chelate compound, light reflection coefficient

ABSTRACT: Considering that polychelates (high molecular compounds containing metals) are finely dispersed colored compounds sparingly soluble in organic solvents, the authors chose the method of diffuse reflection spectra to establish the correlation between the structure of a chelate or polychelate and its optical characteristics (reflection coefficient). Copper chelates were investigated. The spectra were taken with the instruments SF-10 (visible) and IKS-12 with an IPO-12 attachment (infrared), and found to be similar for the monomer and corresponding polymer. Polychelates obtained at higher temperatures were found to have a more regular network structure than those obtained at lower temperatures. It is concluded that the study of diffusion reflection spectra constitutes a reliable method for identifying the structure of the chelates (network, linear) and determining the degree of its perfection. Authors thank O. D.

Card 1/2 UDC: 543.4.422.4

L 42161-66

ACC NR: AP6021608

3

Yesayashvili for participating in the experiments, and Z. V. Zvonkov and V. M. Vozzhennikov for a useful discussion. Orig. art. has: 3 figures and 1 table.

SUB CODE: 07/ SUBM DATE: 24Nov65/ ORIG REF: 006/ OTH REF: 001

Card 2/2

L 09067-67 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6023914 SOURCE CODE: UR/0363/66/002/007/1200/1205

AUTHOR: Kharakhorin, F. F.; Aksenov, V. V.; Gambarova, D. A.; Khrustalev, B. P.; Kul'bich, R. K.

ORG: none

TITLE: On the mechanism of change of the conduction sign during heat treatment of n-InSb /Paper presented at the All-Union Conference on Diffusion in Semiconductors held in Leningrad on 2 December 1964/

SOURCE: AN SSSR. Izv. Neorg materialy, v. 2, no. 7, 1966, 1200-1205

TOPIC TAGS: indium compound, antimonide, semiconductor conductivity

ABSTRACT: An attempt was made to identify the impurities in InSb on the basis of their characteristic emissions and half-lives following heat treatment of InSb in quartz ampoules activated by a flux of slow neutrons ($0.9\text{-}2.4 \times 10^{13}$ n/cm^2 sec) in an atomic pile. It was shown by the gamma-spectroscopic method that the radioactive impurities Na^{24}, Cu^{64} and Si^{31} migrated from the neutron-activated quartz into n-InSb. The experimental data indicate that the chief cause of the change of the conduction sign during heat treatment of n-InSb is the diffusion of copper. It was shown that vacuum annealing of the ampoules prior to the activation decreases the activity of the N-InSb samples by a factor of 20 to 60. Authors thank L. A. Bovina, M. F. Poluboyarinova and V. G. Vinogradova for their assistance. Orig. art. has: 6 figures and 2 tables.

SUB CODE: 20/ SUBM DATE: 27Oct65/ ORIG REF: 009/ OTH REF: 001

Card 1/1 nst UDC: 546.682'861:537.311.33

KHARAKHORKIN, L.R.

Charles Darwin and tsarist censorship. Trudy Inst.ist.est.i tekh. 31:82-101 '60. (MIRA 13:8)

1. Muzey istorii religii i ateizma Akademii Nauk SSSR.
(Censorship)

KHARKHORDIN, L. R.

Dissertation defended for the degree of Candidate of Philosophical Sciences at the Institute of Philosophy

"Conflict Over the Atheistic Ideas of Darwinism in Russia in the Second Half of the XIX-Start of the XX Century."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

KHARAKHORKINA, K.D.

Hygienic evaluation of meat jelly. Trudy LSGMI 25:118-126 '55. (MIRA 12:8)

1. Kafedra gigiyeny pitaniya Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - dotsent Z.M.Agranovskiy).
(FOOD, jelly, nutritional value (Rus))

GESSEN, A.I.; KLYGA, L.P.; KHARAKHORKINA, K.D.; CHISTYAKOVA, A.M.

Hygienic characteristics of nutrition at trade schools. Trudy LSGMI 31:129-144 '56. (MIRA 12:8)

1. Kafedra gigiyeny pitaniya Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav.kafedroy - dots. Z.M.Agranovskiy).

(SCHOOLS,
trade schools, nutrition (Rus))
(NUTRITION,
in trade schools (Rus))

AGRANOVSKIY, Z. M., prof.; LEBEDEVA, Ye. A.; MAYKOVA, O. P.; KHARAKHORKINA, K. D.

Nutrition in old age as a hygienic problem and methods for its combined study. Trudy LSGMI 67:8-17 '62. (MIRA 15:7)

1. Kafedra gigiyeny pitaniya s klinikoy alimentarnykh zabolevaniy Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - prof. Z. M. Agranovskiy).

(NUTRITION) (GERIATRICS)

KHARAKHORKINA, K. D.

Characteristics of carbohydrate metabolism in old age. Trudy LSGMI 67:54-60 '62. (MIRA 15:7)

1. Kafedra gigiyeny pitaniya s klinikoy alimentarnykh zabolevaniy Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - prof. Z. M. Agranovskiy).

(CARBOHYDRATE METABOLISM) (GERIATRICS)

KOSHINA, Z. P.; MAYKOVA, O. P.; KHARAKHORKINA, K. D.

Assimilability of proteins, fats and carbohydrates in old age.
Trudy LSGMI 67:105-113 '62. (MIRA 15:7)

1. Kafedra gigiyeny pitaniya s klinikoy alimentarnykh zabolevaniy Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - prof. Z. M. Agranovskiy).

(PROTEIN METABOLISM) (FAT METABOLISM)
(CARBOHYDRATE METABOLISM) (GERIATRICS)

KOSHINA, Z. P.; LEBEDEVA, Ye. A.; MAYKOVA, O. P.; KHARAKHORKINA, K. D.

Metabolism in old age with a dietary ration of products with a limited cholesterol content and plant oils partially replacing animal fats. Trudy LSGMI 67:121-148 '62. (MIRA 15:7)

1. Kafedra gigiyeny pitaniya s klinikoy alimentarnykh zabolevaniy Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - prof. Z. M. Agranovskiy).

(CHOLESTEROL) (NUTRITION) (GERIATRICS)
(METABOLISM)

KOSHINA, Z. P.; LEBEDEVA, Ye. A.; MAYKOVA, O. P.; KHARAKHORKINA, K. D.

Metabolism in old age with a dietary ration enriched by soybean phosphatides. Trudy LSGMI 67:149-174 '62. (MIRA 15:7)

1. Kafedra gigiyeny pitaniya s klinikoy alimentarnykh zabolevaniy Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - prof. Z. M. Agranovskiy).

(SOYBEAN AS FEEDING STUFF) (METABOLISM)
(LECITHIN) (GERIATRICS)

LEBEDEVA, Ye. A.; MAYKOVA, O. P.; KHARAKHORKINA, K. D.

Metabolism in old age with a ration containing an increased quantity of milk, milk products and vegetables. Trudy LSGMI 67: 175-196 '62. (MIRA 15:7)

1. Kafedra gigiyeny pitaniya s klinikoy alimentarnykh zabolevaniy Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - prof. Z. M. Agranovskiy).

(METABOLISM) (GERIATRICS) (NUTRITION)

KHARAKHORKINA, K. D.

Oxidative processes in the body in old age. Trudy LSGMI 67: 93-104 '62. (MIRA 15:7)

1. Kafedra gigiyeny pitaniya s klinikoy alimentarnykh zabolevaniy Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - prof. Z. M. Agranovskiy).

(OXYGEN IN THE BODY) (GERIATRICS)

LEBEDEVA, Ye. A.; MAYKOVA, O. P.; KHAh_ ^RKINA, K. D.

Recommendations for the rational organization of nutrition in old age. Trudy LSGMI 67:197-201 '62. (MIRA 15:7)

1. Kafedra gigiyeny pitaniya s klinikoy alimentarnykh zabolevaniy Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - prof. Z. M. Agranovskiy).

(NUTRITION) (GERIATRICS)

(MIRA 18:8)

Agranovskiy)

L 31002-66 EWT(1) SCTB DD

ACC NR: AP6008101 (A) SOURCE CODE: UR/0244/66/025/001/0079/0081

AUTHOR: Smolyanskiy, B. L.; Kharakhorkina, K. D.; Moiseyeva, M. V.

ORG: Chair of Nutrition Problems (Kafedra gigeny pitaniya); Clinic of Alimentary Diseases, Leningrad Sanitation-Hygienic Medical Institute (Klinika alimentarnykh zabolevaniy Leningradskogo sanitarno-gigenicheskogo meditsinskogo instituta)

TITLE: Chemical composition and ascorbic acid content in vegetables grown in soil and by the hydroponic method

SOURCE: Voprosy pitaniya, v. 25, no. 1, 1966, 79-81

TOPIC TAGS: plant chemistry, plant growth

ABSTRACT: This study was undertaken in order to fill a gap in the literature on the comparative nutritive values of vegetables grown in soil and by the hydroponic method. The study was made at a Leningrad Oblast sovkhoz. The hydroponic test series was based on a medium of inert keramzit or quartz gravel containing calcium, phosphorous, magnesium, potassium, sodium, nitrogen, iron, zinc, copper, etc. Specimens of tomatoes, cucumbers, cauliflower, green onions and parsley (grown simul-

UDC: 613.262:577.164.2

Card 1/2

L 31002-66
ACC NR: AP6008101

taneously in soil and hydroponically) were tested in the spring, fall, and winter for chemical composition (acidity, dry residue, sugar, ash content, calcium and phosphorous levels) and for vitamin C content; the results of this comparison are presented in a table. It is concluded that both methods of cultivation produce vegetables with essentially the same chemical composition, ascorbic acid content, and organoleptic properties. Orig. art. has: 1 table. [14]

SUB CODE: 06,02 SUBM DATE: 13Apr65/ ORIG REF: 001/ ATD PRESS: 4215

Card 2/2 LC

TERESHCHENKO, V. G., gornyy inzh.; KHARAKOZ, A. M., gornyy inzh.

Effect of the accuracy of heat calculations for the air in longwalls on the productivity of cooling apparatus. Ugol' Ukr. 7 no.4:13-14 Ap '63. (MIRA 16:4)

(Mine ventilation)

KHARAKOZ, A.V.

Insects of the herbaceous vegetation of the Veliko-Anadol' Forest.
Nauk.zap.Dnipr.un. 48:151-164 '55 (MIRA 10:11)
(Ol'ginka District--Forest insects)

KHARAKOZ, A.Ye.; GOLUBEVA, A.F.

Filter-press waste of sugar factories in Kirghizistan. Izv.AN Kir.SSR.Ser.est.i tekh.nauk 2 no.3:75-78 '60. (MIRA 13:9)
(Kirghizistan--Sugar--By-products)

ACC NR: AT7001351 SOURCE CODE: UR/0000/66/000/000/0144/0150

AUTHOR: Bloshinskiy, S. V.; Kharakoz, A. Yo.; Osipova, T. P.; Abramova, V. F.

ORG: none

TITLE: Carbonate method of separating rare earth elements

SOURCE: AN KirgSSR. Institut neorganicheskoy i fizicheskoy khimii. Issledovaniya po khimii redkikh i soputstvuyushchikh im elementov (Studies in chemistry of rare and other accompanying elements). Frunze, Izd-vo Ilim, 1966, 144-150

TOPIC TAGS: carbonate, rare earth element

ABSTRACT: A method was developed for directly separating rare earth elements from acid extracts of ore and concentration "tailings," omitting the stage of precipitation of iron and other associated elements. The method is based on the difference in the precipitation pH of carbonates of rare earth elements, aluminum, iron and other elements, and the coprecipitation of the rare earth carbonates with aluminum hydroxide. Experiments on artificial mixtures showed that 98.50% of the rare earth elements are extracted at pH 5.5, and 99.40 are extracted at pH 6. The method can also be used to separate large quantities of iron and aluminum from rare earth elements. Orig. art. has: 1 figure and 2 tables.

SUB CODE: 07/ SUBM DATE: 15Apr66/ ORIG REF: 002

Card 1/1

DRUZHININ, I.G.; KHARAKOZ, A.Ye.; ZINOV'YEV, A.A., red.; SEMIKINA, T.F., red.izd-va; ANOKHINA, M.G., tekhn.red.

[Physicochemical characteristics of the peat of Kirghizistan] Fiziko-khimicheskaia kharakteristika torfa Kirgizii. Frunze, Izd-vo Akad.nauk Kirgizskoi SSR, In-t khimii, 1959. 95 p. (MIRA 13:7)

(Kirghizistan--Peat)